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United States Patent [19][11] **Patent Number:** **6,158,523****Gengler et al.**[45] **Date of Patent:** **Dec. 12, 2000**[54] **AGRICULTURAL DISC MOUNTING SYSTEM AND METHOD**[75] Inventors: **Allan S. Gengler**, Beloit; **Bradley A. Heidrick**, Simpson; **Jeffrey S. Hughes**, Glen Elder, all of Kans.[73] Assignee: **Sunflower Manufacturing Co., Inc.**, Beloit, Kans.[21] Appl. No.: **09/183,360**[22] Filed: **Oct. 30, 1998**[51] Int. Cl.⁷ **A01B 35/28**[52] U.S. Cl. **172/574; 172/572; 172/573; 172/708; 172/711**[58] **Field of Search** **172/572, 708, 172/570, 707, 705, 711, 573, 500, 574, 643; 267/158, 164, 47**[56] **References Cited****U.S. PATENT DOCUMENTS**

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[57] **ABSTRACT**

A disc mounting system includes the attachment of each disc to a disc gang bar via a dedicated leaf spring. Each of the leaf springs, which can be generally U shaped, are attached at a top end to the gang bar and at a lower leg to a disc spindle such that the disc is positioned at least partially alongside the spring lower leg. The mounting system allows the disc to deflect vertically, laterally or torsionally when the disc encounters an obstacle. An optional shield can be attached to the leaf spring to prevent soil and debris thrown out by adjacent discs from entering the spring. A disc scraper blade can also be attached to the shield.

37 Claims, 4 Drawing Sheets